Maine Department of Environmental Protection
Date: May 13, 2004

SUMMARY: Changes to Maine's Water Quality Criteria

2003-2004 legislative session

Chapter 551. An Act to Amend Certain Laws Relating to Environmental Protection (Sections 5, 6 and 7)

Section 5 of this chapter was proposed by the Department in order to allow the licensing of certain classes of subsurface discharges that will not have a significant adverse impact on ground water quality by rule. Although license-by-rule is a feature of the federal NPDES program, it has not previously been authorized under Maine's wastewater discharge program.

Section 6 reverses a change that was previously made to provision setting the minimum frequency for holding public hearings related to the water classification system. The earlier change reduced a hearing from at least every 3 years to at least every 4 years, and this change was later determined to conflict with federal requirements. Section 6 restores the earlier text and requires a hearing at least every 3 years, which is consistent with federal requirements.

Section 7 amends a geographic discrepancy in the water classification law that went unnoticed for many years. The present Class AA boundary for the Dennys River ends at U.S. Route 1 and the Class B/SA boundary is shown to occur downstream of U.S. Route 1. In actuality, tidal waters extend well upstream of U.S. Route 1, putting saline water into the defined freshwater Class AA segment and eliminating any Class B segment altogether as the river flows through the village of Dennysville. By changing the Class AA/B boundary to the Bunker Hill Road bridge, this error was corrected to provide an upstream AA segment, a Class B segment as it passes through the village and a downstream Class SA tidal segment as it has always been envisioned.

Chapter 574. An Act to Amend Water Quality Laws to Aid in Wild Salmon Restoration

Chapter 574 amended Maine's Water Quality Classification Law to allow a narrow exception to the general prohibition against direct discharges to Class AA waters, and to change the standards for Class A waters. The discharges that would potentially be allowed, with approval by the department, are intended to improve the water quality for Atlantic Salmon.

The rivers included within the context of the original bill, LD 1833, were classified as AA and A, in part, because they had naturally reproducing populations of Atlantic salmon. Those populations are now listed as Endangered by the federal Endangered Species Act. Present conditions remain dire, with one indication being the very low returns of adults to the Downeast rivers.

The National Academy of Sciences recently produced an assessment that identified water quality, in particular acidification in freshwater, as one of the threats that urgently needs action. Acid rain has been implicated for both chronic and episodic acidification in Northeastern U.S. and Canadian watersheds. Acid rain has caused the loss of salmon populations in Nova Scotia, Canada and in Norway and Sweden. Water quality monitoring in Maine Downeast rivers have documented episodic low pH and acid neutralizing capacity, and elevated dissolved aluminum values associated with high flow events caused by rain and snowmelt throughout the year.

Monitoring of out-migrating salmon smolts in the Narraguagus and Dennys River in 2001-2002 indicated compromised ability of young of the year salmon, known as smolt, to adjust to saltwater. These fish had measured body characteristics that indicated they were not well prepared to make the transition from fresh to saltwater. Studies conducted here in Maine and elsewhere clearly indicate compromised smolt development and a decline in salmon survivorship in association with low pH and the complex of low calcium, low levels of acid neutralizing compounds, high concentration of aluminum, or high dissolved organic carbon.

Acid deposition causes basic calcium ions to leach out of soil. This initially causes an increase in surface water calcium. But as acid deposition continues, calcium is ultimately depleted from surrounding soils, which eventually results in a decrease in surface water calcium. This reduction also causes an increase in aluminum compounds in water, which are harmful to fish gills.

Modeling of acid rain affected watersheds in nearby Nova Scotia indicate reductions in acid deposition will result in recovery of these watersheds. But while surface water acidity will recover within a few decades, base cations in most streams will not recover to pre-industrial levels within the next 100 years.

It has been demonstrated elsewhere that adding calcium to rivers and streams can help ameliorate the effects of low pH and aluminum toxicity to fish. Large-scale liming projects in Norway have resulted in restored Atlantic salmon populations. Liming projects in streams polluted by acid mine drainage have resulted in restored native fish populations throughout the Eastern U.S.

Any permit issued will limit calcium addition to the concentration range thought to naturally occur before the effects of acid deposition.

Chapter 650. An Act to Protect Maine's Coastal Water

Chapter 650 enacts provisions concerning discharges of graywater and blackwater from commercial passenger vessels. Maine's waste discharge law does not contain an exemption for discharges from vessels similar to the federal exemption. However, Maine has rarely used its authority in regard to vessels.

Concerns related to potential discharges from large commercial passenger vessels resulted in the introduction of two bills in the 2002-2003 legislative session, one of which was carried over and amended to require the Department to conduct a stakeholder process and produce a legislative report concerning vessel discharges. That process and further work by the Legislature resulted in Chapter 650, which was supported by the Department. Information on Chapter 650, the stakeholder process, including the resulting report, is available at: http://www.state.me.us/dep/blwq/topic/vessel/cruiseship/index.htm

Significant aspects of Chapter 650 include:

- Reporting requirements related to unauthorized discharges of graywater or blackwater
- Licensing requirements related to discharges of graywater, or mixtures of graywater and blackwater
- Requirement to maintain an agent for service of process in Maine
- Requirements for the Department to report back to the Legislature.
- Statement of legislative intent that the regulation of graywater and graywater and blackwater mixture discharges from large commercial passenger vessels that are equipped from

wastewater treatment systems that require continuous discharge be consistent with the regulation of similar vessels in Alaska.

Chapter 650 is stricter than federal requirements in that it will require filing under a general permit for discharges of graywater, and mixtures of graywater and blackwater, from large commercial passenger vessels. It should also be noted that Chapter 650 does not conflict with federal limitations on state authority to regulate marine sanitation devices used to treat sewage.

Chapter 663. An Act to Reclassify Certain Downeast Waters

In the 2002-2003 session, Maine's Legislature approved a series of upgrades in classification that are codified in Maine's Classification Law. A small number of waters were taken out of that legislation because of uncertainty about whether blueberry operations were located in their watersheds and, if they were, what the possible impact on the operations might be. These proposed changes were included in legislation in the 2003-2004 session, and make up Chapter 663.

The waters proposed for upgrade to Class AA were identified as having valuable habitat for Atlantic salmon, and their protection fits with the State's overall goal of restoring salmon populations to these waters. Indian and Harrington Rivers, proposed for Class A, are not salmon waters and the proposal was intended to protect their present high quality.

2000 - 2001 legislative session

PL 120, c. 232, sections 11 and 12, of An Act to Amend Certain Laws Regarding Land and Water Quality Protection

Section 11 adds a definition of "cooling water intake structures." The addition was intended to increase consistency with Section 316(b) of the Clean Water Act.

Section 12 amends the definition of "publicly owned treatment works". The amendment was intended to bring the definition more in line with federal provisions at 40 CFR 403.3.

Rule changes

Chapter 519 (amended 10/6/2001) -- Interim Effluent Limitations and Controls for the Discharge of Mercury.
http://www.maine.gov/sos/cec/rcn/apa/06/096/096c519.doc
This chapter was included in Maine's water quality docket submissions in 2000. The only change made to this chapter since that submission has been to remove the sunset provision. The sunset was removed to be consistent with statutory changes contained in PL 2001, ch. 418(2).

Chapter 579 (effective 5/27/2003) -- Classification Attainment Evaluation Using Biological Criteria for Rivers and Streams
http://www.maine.gov/sos/cec/rcn/apa/06/096/096c579.doc

The technical and policy protocol described by the rule has been in use by the Department since 1990. Adoption of this protocol incorporate into law numeric biocriteria that refine and interpret Maine's existing narrative 'aquatic life' standards for each riverine water quality classification.

The rule applies statewide to all classified rivers and streams. It does not apply to other waterbody-types such as wetlands, lakes, or estuaries. The biocriteria rule describes the process that the Department uses to make classification attainment decisions related to aquatic life in rivers and streams. The protocol involves sampling of biological organisms (benthic macroinvertebrates) from rivers and streams, laboratory analyses by qualified personnel, statistical modeling analysis of biological data, and procedures for determination of final classification attainment decision results.